

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>8666 WO GI-FRI</b>		FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/006962</b>	International filing date (day/month/year) <b>28.06.2004</b>	Priority date (day/month/year) <b>23.07.2003</b>	
International Patent Classification (IPC) or national classification and IPC <b>F16H57/04</b>			
Applicant <b>ZF FRIEDRICHSHAFEN AG</b>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>9</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																							
<input type="checkbox"/>	Box No. II	Priority																							
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention																							
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
<input type="checkbox"/>	Box No. VI	Certain documents cited																							
<input type="checkbox"/>	Box No. VII	Certain defects in the international application																							
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application																							

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/006962

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
  - ☐ publication of the international application (Rule 12.4)
  - ☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:

pages 1-12 \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☒ the claims:

nos. 1-13 \_\_\_\_\_ as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☒ the drawings:

sheets 1/2-2/2 \_\_\_\_\_ as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/006962

## Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
  - ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
  - ☒ not complied with for the following reasons:

See Supplemental Box.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/006962

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims

YES

Claims

1-6, 7-13

NO

Inventive step (IS)

Claims

YES

Claims

1-6, 7-13

NO

Industrial applicability (IA)

Claims

1-13

YES

Claims

NO

## 2. Citations and explanations (Rule 70.7)

See Supplemental Box.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/006962

Box No. VIII      Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

See Supplemental Box.

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

*Continuation of Boxes IV, V and VIII*

1. PRIOR ART

This report refers to the following documents:

- D1: DE 199 34 405 A (DAIMLER CHRYSLER AG),  
8 February 2001 (2001-02-08)
- D2: EP 1 316 746 A (ZAHNRADFABRIK FRIEDRICHSHAFEN),  
4 June 2003 (2003-06-04)
- D3: DE 38 03 685 A (EMITEC EMISSIONSTECHNIK),  
17 August 1989 (1989-08-17)
- D4: DE 37 43 195 C (PIV ANTRIEB REIMERS KG WERNER),  
9 February 1989 (1989-02-09)
- D5: EP 0 362 043 A (RENAULT), 4 April 1990 (1990-04-04)
- D6: US 5 341 901 A (COFFEY WAYNE R ET AL),  
30 August 1994 (1994-08-30)
- D7: US 5 667 036 A (DHILLON JERMANJIT S ET AL),  
16 September 1997 (1997-09-16)

2. INDEPENDENT CLAIM 1

The application fails to meet the requirements of **PCT Article 33(1)** because the subject matter of claim 1 is not novel (**PCT Article 33(2)**).

Essentially, document D1 discloses the following (see, for example, figures 4a and 4b):

## Supplemental Box

- an **oil-carrying** (see the abstract, line 3)  
**shaft** (2), with
- an inner chamber (3),
- oil-carrying open passages (39) on the inside wall (24),
- a tube acting as a distribution means (4).

3. INDEPENDENT CLAIM 7

The application fails to meet the requirements of **PCT Article 33(1)** because the subject matter of claim 7 is not novel (**PCT Article 33(2)**).

3.1 Essentially, document D1 discloses the following (see, for example, figures 2a and 2b):

- an **oil-carrying** (see the abstract, line 3)  
**shaft** (2), with
- an inner chamber (3),
- oil-carrying open passages (39) on the inside wall (24),
- a tube acting as a distribution means (4).

3.2 Similar shafts are also known from document D2 (see figure 2) and document D3 (see figure 1, II-II).

With reference to the objection relating to clarity discussed in point 6.1 below, the term "tube", according to the applicant's own interpretation, also covers "**solid profiles**" (see claim 11). Consequently documents D4 (for example, item 53 in figure 5), D5

## Supplemental Box

(figure 2) and even D6 ("rotor 58") can be considered prejudicial to the novelty of claim 7.

(Note: Documents D7, D8 and D9 will be relevant for the assessment of inventive step at a later stage in the procedure.)

4. DEPENDENT CLAIMS 2-6 AND 8-13

Claims 2 to 6 and 8 to 13 do not contain any features that meet the PCT requirements in respect of **novelty and/or inventive step** when combined with the features of any of the back-referenced claims.

**For example**, document D1 is relevant to claim 3 (column 8, line 28 - rotary swaging), to claim 4 (inner grooves 42), to claim 5 (figure 5c), to claim 6 (figure 5b), to claims 8 and 13 (drill hole 51), to claim 9 (left-hand part of figure 5a), and to claims 10 and 11 (rectangular-section hollow profile 6 in figure 2c). The medium duct 35 in figure 1 is relevant to claim 12.

5. UNITY

The Examining Authority has determined that this international application contains multiple inventions or groups of inventions which are not linked by a single general inventive concept (PCT Rule 13.1). These are as follows:

- I. Claim 1 (and the dependent claims appended to it)
- II. Claim 7 (and the dependent claims appended to it)



## Supplemental Box

The concept linking these two groups is not novel (see points 2 and 3 above).

6. CLARITY

6.1 Claim 1 specifies a "tube", while claim 11 (which is dependent on claim 1) specifies a "solid profile". The embodiments described by these terms are mutually incompatible (PCT Article 6).

6.2 In this instance it is not permissible to have two independent device claims (claims 1 and 7) because they fail to meet the requirement of unity of invention (PCT Article 6).